

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	15	(US-20040187485-\$ or US-20010024628-\$ or US-20060131102-\$).did. or (US-5014510-\$ or US-6550573-\$ or US-5897843-\$ or US-6689327-\$ or US-5110560-\$ or US-4220625-\$ or US-6990804-\$ or US-5012642-\$ or US-6485694-\$ or US-5934073-\$). did. or (GB-2220150-\$ or EP-411561-\$).did.	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:40
L2	15485	catalytic converter	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:40
L3	40801	diffuser or inlet sleeve	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:41
L4	260	2 and 3	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:41
L5	1451756	cross-sectional or cross-section or cross sectional	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:04
L6	2824	3 with 5	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:42
L7	59	6 and 2	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:44
L8	9	6 with perimeter	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:03
L9	0	8 and 2	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 12:44
L10	45	("1152426"   "1445049"   "1480408"   "1773280"   "1994045"   "2272358"   "2664700"   "2800291"   "2858853"   "2956400"   "2968150"   "3060681"   "3072368"   "3174282"   "3184184"   "3521837"   "3578264"   "3588005"   "3635517"   "3741285"   "3776363"   "4066214"   "4076454"   "4257640"   "4284302"   "4318669"   "4343506"   "44550045"   "4971768").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/19 13:58

## EAST Search History

L11	1711400	cross-sectional or cross-section or cross sectional or cross section	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:04
L12	2636726	area	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:04
L13	188457	11 near4 12	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:05
L14	1540	13 same 3	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:05
L15	999	13 with 3	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:06
L16	25	15 and 2	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:06
L17	81	15 and perimeter	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/19 14:06
S1	226	exhaust treatment device	US-PGPUB; USPAT	ADJ	ON	2007/03/14 12:27
S2	948023	substrate	US-PGPUB; USPAT	ADJ	ON	2007/03/14 12:28
S3	93	S1 and S2	US-PGPUB; USPAT	ADJ	ON	2007/03/14 12:41
S4	0	165/Dig. "402"	US-PGPUB; USPAT	ADJ	ON	2007/03/14 15:13
S5	0	165/402.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/03/14 15:14
S6	35	165/dig.402.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/03/14 16:13
S7	616	165/159.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/03/14 17:01
S8	0	"2001024628"	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:16
S9	1	"20010024628"	US-PGPUB; USPAT	ADJ	ON	2007/03/14 17:08
S10	22	preliminary catalytic converter	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:00
S11	22	"2220150"	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/15 08:01

## EAST Search History

S12	2	"0411561"	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/15 08:03
S13	16	"411561"	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/15 08:04
S14	2	((("5012642") or ("5014510"))).PN.	US-PGPUB; USPAT	OR	OFF	2007/03/15 08:07
S15	45	Laimbock.in.	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:08
S16	14292	catalytic near3 converter	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:42
S17	2373522	elongated or long	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:43
S18	3351981	formed or deposited	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:45
S19	2917404	cross section or area	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:46
S20	310	S16 near6 S17	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:46
S21	10	S18 with S20	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:51
S22	2018388	catalyst or metal or catalytic	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:52
S23	416251	S18 near4 S22	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:53
S24	1887617	elongated or longitudinal or extended	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:53
S25	458946	perforate or perforated or mesh	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:54
S26	9074	S24 near6 S25	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:55
S27	58	S16 and S23 and S26	US-PGPUB; USPAT	ADJ	ON	2007/03/15 08:56
S28	23	S27 not wellington.not vinegar	US-PGPUB; USPAT	ADJ	ON	2007/03/15 09:03
S29	2	((("3736105") or ("3953176"))).PN.	US-PGPUB; USPAT	OR	OFF	2007/03/15 11:22
S30	168	preconverter or pre-converter or pre-catalytic converter	US-PGPUB; USPAT	ADJ	ON	2007/03/15 11:27
S31	86	S30 and S16	US-PGPUB; USPAT	ADJ	ON	2007/03/15 11:27
S32	12	S30 and cone	US-PGPUB; USPAT	ADJ	ON	2007/03/15 11:29

## EAST Search History

S33	10	S32 and S16	US-PGPUB; USPAT	ADJ	ON	2007/03/15 11:29
S34	61	("20010026780"   "20010037573"   "20010043891"   "20020011002"   "20020014007"   "20020054844"   "20020068025"   "20020096225"   "20020106312"   "20020168304"   "20030003030"   "20030003031"   "20030039596"   "20030113241"   "3523590"   "3841435"   "4118199"   "4206179"   "4207661"   "4425304"   "4625511"   "4782661"   "4865818"   "4969264"   "5055274"   "5065576"   "5106588"   "5118476"   "5119551"   "5216809"   "5329698"   "5403559"   "5523059"   "5525307"   "5724735"   "5829132"   "5853675"   "5857329"   "5866079"   "5879640"   "5882608"   "5953817"   "5958347"   "5980837"   "6000131"   "6051193"   "6057263"   "6086829"   "6101714"   "6185819"   "6224835"   "6247552"   "6293010"   "6299843"   "6324758"   "6381843"   "6491878"   "6497847"   "6568078"   "6701617").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 11:49
S35	9	"766469"	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:14
S36	86002	(increased or increase or maximize or more) near3 surface near3 area	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:15
S39	1972129	cone or widening or increasing or widen	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:21
S42	12452	S36 same S39	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:21
S43	104	S42 and S16	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:22
S44	6298	S36 with S39	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:23
S47	981	422/168.ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:24

## EAST Search History

S48	4	S44 and S47	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:37
S49	1	"5897843".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 12:37
S52	374834	sleeve	US-PGPUB; USPAT	ADJ	ON	2007/03/15 12:45
S53	133	S52 same S16	US-PGPUB; USPAT	ADJ	ON	2007/03/15 12:47
S54	12664	sleeve near4 open near4 end	US-PGPUB; USPAT	ADJ	ON	2007/03/15 12:48
S55	25	S54 and S16	US-PGPUB; USPAT	ADJ	ON	2007/03/15 12:55
S57	2454	422/177,180.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/03/15 15:37
S58	375867	pre-catalyst or precatalyst or sleeve or pre-converter or preconverter	US-PGPUB; USPAT	ADJ	ON	2007/03/15 15:46
S59	172	S57 and S58	US-PGPUB; USPAT	ADJ	ON	2007/03/15 15:46
S60	9	("3770389"   "4220625"   "4282186"   "4397772"   "4400309"   "4842954"   "5110561"   "5151254"   "5386696").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 16:01
S61	15	("3189563"   "3208131"   "3597165"   "3770389"   "3773894"   "3811845"   "3819334"   "3897366"   "3929671"   "3956185"   "4078898").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 16:08
S62	233601	conical and (longitudinal or axial)	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 16:09
S63	191	S62 and S57	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 16:30
S64	158	S63 not S59	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/15 16:30
S65	2454	422/177,180.ccls.	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:31
S66	375867	pre-catalyst or precatalyst or sleeve or pre-converter or preconverter	US-PGPUB; USPAT	ADJ	ON	2007/03/16 07:12
S67	172	S65 and S66	US-PGPUB; USPAT	ADJ	ON	2007/03/16 07:12

## EAST Search History

S68	233601	conical and (longitudinal or axial)	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 07:12
S69	191	S68 and S65	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 07:12
S70	158	S69 not S67	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 07:56
S72	45	("1152426"   "1445049"   "1480408"   "1773280"   "1994045"   "2272358"   "2664700"   "2800291"   "2858853"   "2956400"   "2968150"   "3060681"   "3072368"   "3174282"   "3184184"   "3521837"   "3578264"   "3588005"   "3635517"   "3741285"   "3776363"   "4066214"   "4076454"   "4257640"   "4284302"   "4318669"   "4343506"   "44550045"   "4971768").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:48
S73	177	diffuser same (mesh or perforated or holes) same catalyst	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:49
S74	8	S73 and S65	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:51
S75	103692	corrugate or corrugated	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:52
S76	46	S75 near5 diffuser	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:53
S77	0	S76 and S65	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:52
S78	1815	S66 with S75	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 11:53
S79	14093	catalytic converter	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:54
S80	374834	sleeve	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:55
S81	34717	"30" near5 S80	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:56
S82	1	S81 same S79	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:55

## EAST Search History

S83	1249	S75 near5 S80	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:56
S84	0	S83 same S79	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:56
S85	1	S83 and S79	US-PGPUB; USPAT	ADJ	ON	2007/03/16 11:56
S86	451250	mesh or perforated	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:06
S87	32667	S86 near5 metal	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:06
S88	411	S87 and S79	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:06
S89	94	S88 and S65	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:07
S90	232242	ridges or corrugate or corrugated or ridged	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:07
S91	453	S87 with S90	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:07
S92	35	S91 and S79	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:07
S93	375867	pre-catalyst or precatalyst or sleeve or pre-converter or preconverter	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:36
S94	172	S93 and S65	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:30
S95	32	S94 and perforated	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:30
S96	32	S94 and (perforate or perforated)	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:35
S98	15529	exhaust near2 gas near2 (system or apparatus)	US-PGPUB; USPAT	ADJ	ON	2007/03/16 13:34
S99	1258	S98 and S93	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:36
S10 0	1107	pre-catalyst or precatalyst or pre-converter or preconverter	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:02
S10 1	141	S98 and S100	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:37
S10 2	30	S101 and housing	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:41
S10 3	2	S101 and (within near3 muffler)	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:42
S10 4	908	within near2 muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:43
S10 5	2	S104 and S100	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:42

## EAST Search History

S10 6	1228	(within or inside) near2 muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:43
S10 7	2	S105 and S100	US-PGPUB; USPAT	ADJ	ON	2007/03/16 12:43
S10 8	172	S98 and S106	US-PGPUB; USPAT	ADJ	ON	2007/03/16 13:19
S10 9	42	S108 and primary	US-PGPUB; USPAT	ADJ	ON	2007/03/16 13:20
S11 0	89	primary near3 catalytic converter	US-PGPUB; USPAT	ADJ	ON	2007/03/16 13:21
S11 1	7	S110 and S106	US-PGPUB; USPAT	ADJ	ON	2007/03/16 13:25
S11 2	45	Laimbock.in.	US-PGPUB; USPAT	ADJ	ON	2007/03/16 13:35
S11 3	51921	exhaust near3 (system or apparatus)	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:02
S11 5	11	(US-20040187485-\$ or US-20010024628-\$).did. or (US-5014510-\$ or US-5012642-\$ or US-6689327-\$ or US-4220625-\$ or US-6485694-\$ or US-5897843-\$ or US-5110560-\$).did. or (GB-2220150-\$ or EP-411561-\$). did.	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/16 13:46
S11 6	0	closed at one end	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/16 13:47
S11 7	2148	cover plate near4 (tube or pipe or sleeve)	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/16 13:47
S11 8	4	S117 and S79	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/16 13:50
S11 9	8864	cover plate near5 opening	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/16 13:50
S12 0	11	S119 and S79	US-PGPUB; USPAT; EPO	ADJ	ON	2007/03/16 13:50
S12 1	168744	pre-catalyst or precatalyst or pre-converter or preconverter or preliminary	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:47
S12 2	127	S113 with S121	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:04
S12 3	893912	housing or muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:04



## EAST Search History

S12 4	37	S122 and S123	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:17
S12 5	4	S79 (inside or within) muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:18
S12 6	1807	(inside or within or enclosed or encased) near5 muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:21
S12 7	51	S79 near6 S126	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:48
S12 8	38	("0677357"   "2363236"   "2721619"   "2732913"   "3180712"   "3445196"   "3672464"   "3972687"   "4050903"   "4086063"   "4209493"   "4368799"   "4393652"   "4426844"   "4427836"   "4541240"   "4580657"   "4601168"   "4632216"   "4851015"   "4866932"   "4890690"   "4969537"   "5043147"   "5139107"   "5140813"   "5170020"   "5321215"   "5355973"   "5426269"   "5808245"   "5828013").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 14:46
S13 1	14818	muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:48
S13 2	10	S121 with S79 with S131	US-PGPUB; USPAT	ADJ	ON	2007/03/16 14:48
S13 3	7	("20040074231"   "4899540"   "4916897"   "5063736"   "5285640"   "6722124"   "6729127").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 14:56
S13 4	21	("2674521"   "2880079"   "3302394"   "3445195"   "3460916"   "3656915"   "3710575"   "3730691"   "3733181"   "3947544"   "4060985"   "4164847"   "5010051"   "5140813").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2007/03/16 15:02
S13 5	16	"86843"	US-PGPUB; USPAT	ADJ	ON	2007/03/16 15:27
S13 6	14093	catalytic converter	US-PGPUB; USPAT	ADJ	ON	2007/03/17 09:52
S13 7	168744	pre-catalyst or precatalyst or pre-converter or preconverter or preliminary	US-PGPUB; USPAT	ADJ	ON	2007/03/17 09:52
S13 8	14818	muffler	US-PGPUB; USPAT	ADJ	ON	2007/03/17 09:52
S13 9	10	S137 with S136 with S138	US-PGPUB; USPAT	ADJ	ON	2007/03/17 09:56
S14 0	25	S137 with S138	US-PGPUB; USPAT	ADJ	ON	2007/03/17 09:56

## EAST Search History

S14 1	12	(S137 with S138) and (S136 with S138)	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:27
S14 2	1	"5934073".pn.	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:11
S14 3	3	"5514348"	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:11
S14 5	197635	perforated or perforation	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:28
S14 6	1874463	metal	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:28
S14 7	14001	S145 near5 S146	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:28
S14 8	28	S147 same S136	US-PGPUB; USPAT	ADJ	ON	2007/03/17 10:28